170039 NW-125 SHEET 1 OF 1 WELL COMPLETION DIAGRAM UCATION: Memphis Depot DEBLING CONTRACTOR: Road Longest: LOCATION: Memphis Depot DEBLING CONTRACTOR: Road Longest: STATT: 04/23/2002 END: 04/24/2002 WITER LEVELS: STATT: 04/23/2002 END: 04/24/2002 Image: Statt: 04/23/2002 END: 04/24/2002 LOGGER: Bryan Burkingstock. Image: Statt: 04/23/2002 Statt: 04/23/2002 END: 04/24/2002 Image: Statt: 04/23/2002 END: 04/24/2002 LOGGER: Bryan Burkingstock. Image: Statt: 04/23/2002 Image: Statt: 04/23/2002 END: 04/24/2002 Image: Statt: 04/23/2002 Image: Statt: 04/23/2002 END: 04/24/2002 Image: Statt: 04/23/2002 Image: Statt: 04/23/2002 END: 04/24/2002 Image: Statt: 04/23/2004 Image: Statt: 04/23/2002 END: 04/24/2002 Image: Statt: 04/23/2004 Image: Statt: 04/23/2002 END: 04/24/2002 Image: Statt: 04/23/2004 Image: Statt: 04/23/2004 End Image: Statt: 04/23/2004 Image: Statt: 04/23/2004 Image: Statt: 04/23/2004 End Image: Statt: 04/23/2004 Image: Statt: 04/23/2004 Image: Statt: 04/23/2004 End: 04/24/2004 Image: Statt: 04/23/20		PROJECT NUMBER		WELL NUMBER		
WELL COMPLETION DIAGRAM PROJECT: EBT Tratability Study LOCATION: Memphis Depot DELLING CONTRACTOR. Beart Longver DELLING CONTRACTOR. Beart Longver TART: 04/23/2002 END: 04/24/2002 OCORER: Byen Burkingstock. A diamate any provide casing / 6 inch outer casing. AUTOR CONTRACTOR. Beart Longver OCORER: Byen Burkingstock.				MW-12	25 SHEET 1 OF	1
DRILLING CONTRACTOR. BearLongvear WATER LEVELS: START: 04/23/2002 END: 04/24/2002 LOGGER: Bryan Burkingstock Image: Contraction at well feet MSL feet MSL Image: Contraction at well feet MSL feet MSL feet MSL Image: Contraction at well feet MSL feet MSL feet MSL Image: Contraction at well feet MSL feet MSL feet MSL Image: Contraction at well feet MSL feet MSL feet MSL Image: Contra	CH2MHILL	WELL COMPLETION DIAGRAM				
DRILLING METHOD AND EQUIPMENT USED : Rotasonic rig (4 linch sample casing / 6 linch uter casing) END: 04/24/2002 LOGGER : Bryan Burkingstock VATER LEVELS : START : 04/23/2002 END: 04/24/2002 LOGGER : Bryan Burkingstock 3 Image: start : 04/23/2002 END: 04/24/2002 LOGGER : Bryan Burkingstock 3 Image: start : 04/23/2002 END: 04/24/2002 LOGGER : Bryan Burkingstock 3 Image: start : 04/23/2002 END: 04/24/2002 LOGGER : Bryan Burkingstock 3 Image: start : 04/23/2002 END: 04/24/2002 LOGGER : Bryan Burkingstock 3 Image: start : 04/23/2002 Image: start : 04/23/2002 Image: start : 04/23/2002 3 Image: start : 04/23/2002 Image: start : 04/22/2002 Image: start : 04/22/2002 3 Image: start : 04/22/2002 Image: start : 04/22/2002 Image: start : 04/22/2002 3 Image: start : 04/22/2002 Image: start : 04/22/2002 Image: start : 04/22/2002 1 Image: start : 04/22/2002 Image: start : 04/22/2002 Image: start : 04/22/2002 1 Image: start : 04/22/2002 Image: start : 04/22/2002 Image: start : 04/22/2002 1 Image: start : 04/22/20/22/20/20/20/20/20/20/20/20/20/20/	PROJECT : EBT Treatability Study LOCATION : Memphis Dep					
WATER LEVELS: START: 04/23/2002 END: 04/24/2002 LOGGER: Bryan Burkingstock 30 1 Ground elevation at well feet MSL 31	DRILLING CONTRACTOR : Boart Longyeau					
3b 2 1 Ground elevation at well test MSL 2 Top of casing elevation feet MSL 3 Wellhead protection cover type a) drain tube? 3 by 3 feet 9 oranit tube? Dia/type of well casing 2 inch 10-stot Schedule 40 PVC 5 Type screen filter a) Quantify used 2 inch 10-stot Schedule 40 PVC 6 Type of seal Bentonite polisits, DSI Shur-plug 38* a) Quantify used Bags 7 Type of seal Bentonite polisits, DSI Shur-plug 38* bags Bentonite polisits, DSI Shur-plug 38* a) Quantify used 9 Grout a) Grout mix used 90% grout / 10% bentonite powder b) Method of placement c) Vol. of well casing grout Tremmie Method c) Vol. of well casing grout Tremmie Method Development method Development ime Estimated purge volume gaalons Comments Total Depth (BGS)= 110 Final field parameters collected during well development (/ / / PH = /// / Conductivity = Conductivity = "Screen "Grout	WATER LEVELS :			04/24/2002	LOGGER : Bryan Burkingstock	
3b 2 1 feet MSL 3a 1 Ground elevation at well feet MSL 3 drain tabe? a) drain tabe? b) concrete pad dimensions 3 by 3 feet 3 by 3 feet 3 by 3 feet 3 by 3 feet 4 Diar.type of well casing 2 inch 10-slot Schedule 40 PVC 5 Type/slot size of screen 2 inch 10-slot Schedule 40 PVC 6 Type screen filer aga a) Quantity used Bentonite pelets. DSI Shur-plug 38° a) Quantity used Bentonite pelets. DSI Shur-plug 38° a) Quantity used Bentonite pelets. DSI Shur-plug 38° b) Method of placement OV well casing grout 0 Ovelopment method 0 Development time hour Estimated purge volume galions Comments Total Depth (BGS) = 110 feet Final field parameters collected during well development(/ / / pla* Conductivity * mS/cm Conductivity * mS/cm Development * 0 Development time hour Estimated Purge volume galions Conductivity *<						
3a 3a Flush-mount wellhead pad a) drain tube? Flush-mount wellhead pad No 3 by 3 feet 4 Dia Alype of well casing 2 inch Schedule 40 PVC 5 Type/slot size of screen 2 inch Schedule 40 PVC 6 Type screen filter a) Quarity used Sand, DSI H2 9 Quarity used bags 7 Type screen filter a) Quarity used Sand, DSI H2 9 Quarity used bags 7 Type of seal a) Quarity used Bentonte patients, DSI Shur-plug 3/8* bags 8 Grout a) Grout mix used 90% grout /1 0% bentonite powder b) Method of placement c) Vol. of well casing grout Tremmie Method		× 2 1	1- Ground elevatic	on at well	feet MSL	
3a 3a Flush-mount wellhead pad a) drain tube? Flush-mount wellhead pad No 3 by 3 feet 4 Dia Alype of well casing 2 inch Schedule 40 PVC 5 Type/slot size of screen 2 inch Schedule 40 PVC 6 Type screen filter a) Quarity used Sand, DSI H2 9 Quarity used bags 7 Type screen filter a) Quarity used Sand, DSI H2 9 Quarity used bags 7 Type of seal a) Quarity used Bentonte patients, DSI Shur-plug 3/8* bags 8 Grout a) Grout mix used 90% grout /1 0% bentonite powder b) Method of placement c) Vol. of well casing grout Tremmie Method						
a) drain tube? b) concrete pad dimensions b) concrete pad dimensions b) concrete pad dimensions concrete pad dimensio			2- Top of casing elevation		teet MSL	
b) concrete pad dimensions <u>3 by 3 feet</u> 4. Dia./type of well casing <u>2 inch 35chedule 40 PVC</u> 5. Type/slot size of screen <u>2 inch 10-slot Schedule 40 PVC</u> 5. Type/slot size of screen <u>2 inch 10-slot Schedule 40 PVC</u> 6. Type screen filter <u>3 and, DSI #2</u> a) Quantity used <u>bags</u> 7. Type of seal <u>Bentonite pellets, DSI Shur-plug 3/8"</u> b) dentorite pellets, <u>DSI Shur-plug 3/8"</u> b) dentorite pellets, <u>DSI Shur-plug 3/8"</u> b) Method of placement c) Vol. of well casing grout <u>Tremmie Method</u> c) Vol. of well casing grout <u>Tremmie Method</u> c) Vol. of well casing grout <u>Tremmie Method</u> <u>b) Method of placement</u> c) Vol. of well casing grout <u>Tremmie Method</u> <u>b) wethod of placement</u> <u>c) Vol. of well casing grout</u> <u>b) Method of placement</u> <u>c) Vol. of well casing grout</u> <u>b) Method of placement</u> <u>c) Vol. of well casing grout</u> <u>b) Method of placement</u> <u>c) Vol. of well casing grout</u> <u>c) Total Depth (BGS) = 110 feet</u> <u>final field parameters collected during well development(/ / / <u>pH =</u> <u>Conductivity = mS/cm</u> <u>temperature = 'CC</u> <u>Dissoved Xyzegen = mg/l</u></u>	3a —		a) drain tube?			
4 - Dia/type of well casing 2 inch Schedule 40 PVC 2 inch 10-slot Schedule 40 PVC 3 crout 3 Quantity used 4 - Dia/type of well casing 2 inch 10-slot Schedule 40 PVC 3 crout 3 Quantity used 3 Quantity u						
91 ft 5 Type/slot size of screen 2 inch 10-slot Schedule 40 PVC 6 Type screen filter Sand, DSI #2 a) Quantity used bags 7 Type of seal Bentonite pellets, DSI Shurplug 3/8* a) Grout mix used 90% grout / 10% bentonite powder b) Method of placement Tremmie Method c) Vol. of well casing grout Tremmie Method Development method	8	86 ft				
5 - Type/slot size of screen 2 inch 10-slot Schedule 40 PVC 6 - Type screen filter Sand, DSI #2 a) Quantity used bags 7 - Type of seal Bentonite pellets, DSI Shur-plug 3/8" a) Quantity used 90% grout / 10% bentonite powder b) Method of placement Tremmie Method c) Vol. of well casing grout 0ure Development time hour Estimated purge volume gallons Comments Total Depth (BGS) = 110 feet 91 mS/cm 1 feot Sump Final field parameters collected during well development (91 ft	4- Dia./type of well casing		2 inch Schedule 40 PVC	
6 Type screen filter a) Quantity used 7. Type of seal a) Quantity used 7. Type of seal a) Quantity used 7. Type of seal a) Quantity used 8. Grout a) Grout mix used 90% grout / 10% bentonite powder b) Method of placement c) Vol. of well casing grout 15 ft 6 Development method Development time hour Estimated purge volume gallons Comments Total Depth (BGS) = 110 feet 			5- Type/slot size of screen		2 inch 10-slot Schedule 40 PVC	
7- Type of seal Bentonite pellets, DSI Shur-plug 3/8" a) Quantity used bags 5 8- Grout a) Grout mix used 90% grout / 10% bentonite powder b) Method of placement Tremmie Method c) Vol. of well casing grout Development method Development time hour Estimated purge volume gallons Comments Total Depth (BGS) = 110 feet Final field parameters collected during well development (/ / / feet Estimated purge volume ms/cm temperature = °C Dissolved Oxygen = mg/l						
a) Quantity used bags a) Quantity used bags a) Grout mix used 90% grout / 10% bentonite powder b) Method of placement Tremmie Method c) Vol. of well casing grout b) Method of placement Development method Development method Development time hour Estimated purge volume gallons Comments Total Depth (BGS) = 110 feet Final field parameters collected during well development (/ / pH = conductivity = mS/cm temperature = °C Dissolved Oxygen = mg/l		· · · · · · · · · · · · · · · · · · ·	a) Quantity use	a	bags	
a) Grout mix used 90% grout / 10% bentonite powder b) Method of placement c) Vol. of well casing grout Development method Estimated purge volume gallons Comments Total Depth (BGS) = 110 feet Final field parameters collected during well development (/ / pH = conductivity = mS/cm temperature = °C Dissolved Oxygen = mg/l						
c) Vol. of well casing grout C Vol. of well		5		ed	90% grout / 10% bentonite powder	
c) Vol. of well casing grout bevelopment method bevelopment time bevelopment time			b) Method of pla	acement	Tremmie Method	
Development time hour Estimated purge volume gallons Comments Total Depth (BGS) = 110 feet Final field parameters collected during well development (/ / pH = conductivity = mS/cm temperature = °C Dissolved Oxygen = mg/l						
Estimated purge volume gallons Comments Total Depth (BGS) = 110 feet I foot Sump	15 ft	6	Development method			
Comments Total Depth (BGS) = 110 feet I foot Sump Final field parameters collected during well development (/ / / Final field parameters collected during well development (/ / / pH = conductivity = mS/cm temperature = °C Dissolved Oxygen = mg/l			Development time		hour	
Final field parameters collected during well development (/ / / pH = 6 in Final field parameters collected during well development (/ / / pH = conductivity = mS/cm temperature = °C Dissolved Oxygen = mg/l		Estimated purç		e volume	gallons	
Final field parameters collected during well development (/ / pH = <u> conductivity = mS/cm</u> <u> temperature = °C</u> <u> Dissolved Oxygen = mg/l</u>			Comments	Total Depth (BGS) =	= 110 feet	
pH = 6 in conductivity = mS/cm temperature = °C Dissolved Oxygen = mg/l		1 foot Sump				
pH = 6 in conductivity = mS/cm temperature = °C Dissolved Oxygen = mg/l	¥		Final field parar	meters collected during w	well development (/ /):
temperature = °C Dissolved Oxygen = mg/l			pH =			
Dissolved Oxygen = mg/l	<u>6 in</u>		temperature			
Tublity NO	Note: Diagram not to scale.		Turbidity			